

ORIGINAL RESEARCH

Advancing professionalization in human simulation: perspectives of SP educators from around the world on the Association of SP Educators Standards of Best Practice

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ABSTRACT

Introduction

Between 2013 and 2017, the Association of SP Educators (ASPE), a global organization of educators dedicated to the work of human simulation, developed Standards of Best Practice (SOBP) for working with human role players in simulation. These individuals are known by diverse terms, including simulated or standardized patients or participants (SPs). This study had two aims: (1) to understand the ways in which the ASPE SOBP are relevant to the practices of SP educators around the world, and (2) to identify improvements to the ASPE SOBP from a global perspective.

Methods

This qualitative study was undertaken between January 2020 and July 2022. Subjects consented to audio-recorded interviews. A collaborative, inductive coding approach was adopted, followed by thematic analysis, aligned with the methods described by Braun and Clarke. Themes were further updated following reflexive conversations amongst the investigators at meetings over the course of several months and were aligned with the study aims.

Results

Twelve SP educators from six continents participated. Four primary themes were identified (each with multiple subthemes): influencing SP educator practices; advancing professionalization; identifying challenges to implementation; and bridging gaps in the ASPE SOBP.

Discussion

A diverse group of SP educators from around the world identified the ASPE SOBP in general as relevant and applicable to their practice. The standards provided both guidance and flexibility for working with SPs in a safe, effective and quality-based way. At the same time there were challenges noted and recommendations made that can help to inform future iterations of the standards.

What this study adds

- SP educators consider that standards in general are an important and essential tool in their practice.
- The Association of SP Educator (ASPE) Standards of Best Practice (SOBP) are relevant and applicable to the work of SP educators around the world.
- The ASPE SOBP are a powerful tool to advance the professionalization of SP educators.
- SP educators consider that the ASPE SOBP are effective because they are a set of guidelines rather than a how-to manual, allowing for the flexibility to be adapted to individual contexts.
- The standards are a living document, and feedback from diverse SP educators from around the world strengthens the applicability to the work of all SP educators.

Introduction

Simulated or standardized patients or participants (SPs) are well individuals who are carefully trained to take on the role of others such as patients, clients, family members or health professionals for educational, assessment and research purposes. Those overseeing the work of SPs can include faculty or healthcare professionals who engage with SPs as part of their clinical or academic placements as well as those who work solely with SPs in dedicated positions. Although these individuals are known by many terms, we will refer to them as SP educators [1]. SP practices were first documented in 1964 [2] and since this time, many approaches to working with SPs have been developed. Often these practices evolved in reaction to local, context-specific factors rather than from grounding in consensus- and evidence-based methods [3,4]. There was little evidence to suggest one approach to working with SPs was better than another approach [5]. In line with the growth of broader simulation practices, as human simulation grew, it became clear that a set of uniform, evidence-based standards would raise the level of practice and enhance the profession [6]. Evidence-based standards were seen as a critical means to promote safe and effective simulation practices and outcomes and, ultimately, to improve patient care through a transfer of this learning to health care professionals [6].

Between 2013 and 2017, the Association of SP Educators (ASPE), a global organization of educators dedicated to the work of human simulation, created a task force to develop the ASPE Standards of Best Practice (SOBP) to guide SP educators in working with SPs [1]. This group used an evidence-based approach, drawing on published research, expert opinion and a modified Delphi process to build consensus amongst groups of experienced SP educators. The task force consisted of ASPE members, primarily drawn from the USA (reflecting the demographics of ASPE) but also from a few other countries including Australia, Canada, Germany, the Netherlands, Switzerland, Turkey and the United Kingdom. Briefly described, the SOBPs have five foundational values: safety, accountability, collaboration, quality and professionalism. These values underpin five domains: safe work practices, case development, training SPs, program management and professional development (Figure 1). Each domain consists of both principles and practices. To address the wide variation in SP practice,

these standards were created as guidelines rather than as a prescriptive 'how-to' manual. In addition, the ASPE SOBP were designed to be compatible with simulation standards and guidelines developed by other simulation organizations [1].

Although resources are available that focus on applying the ASPE SOBP to practice [7–9], to our knowledge only one German research paper has investigated the appropriateness of implementing the ASPE SOBP in a non-US context [10]. Since SP practice in German-speaking countries differs noticeably from that in North America, the authors drew on various standards in addition to the ASPE SOBP to develop culturally relevant practice guidelines. Studies like this one raise important questions: Has the mostly US authorship resulted in limitations? Can the term 'best' be challenged [11] as only reflecting customary practices in the contexts represented by the mainly US authors? Could the SOBP be augmented to increase their global utility? More generally, in championing 'best' practices, how can ASPE best incorporate perspectives of SP educators from around the world?

In response to these questions, ASPE has taken steps to be more globally inclusive and relevant, including creating an International Member Liaison position on the ASPE Board of Directors in 2020. This study is a direct result of that ASPE initiative. The first elected International Member Liaison (BGB) undertook as her mandated project to lead this qualitative study examining the reactions of experienced SP educators from around the world to the ASPE SOBP. This study had two aims: (1) to understand the relevance of the ASPE SOBP to the practices of SP educators from around the world; and (2) to identify improvements to the ASPE SOBP from a global perspective.

Methods

Study design

This was a qualitative study with a constructivist approach that examined SP educator perspectives and experiences related to the ASPE standards in general and then to each of the domains of the ASPE SOBP. We aligned our approach with Braun and Clark's six-phase process for thematic analysis (TA) which includes: (1) Familiarization with the data; (2) Generating initial codes; (3) Searching for themes; (4) Reviewing themes; (5) Defining and naming themes; and

Figure 1 : Infographic of ASPE SOBP.

(6) Producing the report [12,13]. The study spanned a period of two and a half years (January 2020 to July 2022).

Ethics approval

The project was submitted for IRB review at the principal investigator's (BGB) institution (University of Bern, Switzerland), where IRB review was not deemed necessary. IRB was obtained at a co-investigator's (JLM) institution (University of Iowa, USA), where the data were housed and analysed (#202005457). All participants provided written informed consent to participate.

Recruitment

Maximum variation sampling, a form of purposive sampling, was used to select subjects [14]. Subjects needed to have at least 5 years of experience working with SPs. An initial list of possible subjects was created by searching the ASPE members directory, the internet (for SP programs) and PubMed (for published authors on SP methodology) as well as identifying professional contacts of research team members. From this list, a final group of subjects was selected. To obtain a wide range of SP educator perspectives from around the world, we chose two participants from each of six continents, and included a mix of genders, professional backgrounds, and both ASPE and non-ASPE members. Individuals were contacted via e-mail.

Data collection

Investigators conducted 60-minute audio-recorded interviews via Zoom. Interviews were performed in English (BGB, CMS or HH) using a semi-structured topic guide (Table 1). All audio recordings were transcribed (clean-read verbatim). Transcripts of the interviews were automatically generated from the recordings by ER using Otter.ai software,

reviewed by ER and JLM for accuracy and then further reviewed and manually revised for clarity and correctness by the investigator who conducted the interview (BGB, CMS or HH).

Data analysis

Following Braun and Clark's recent work characterizing TA as a 'family of methods' [15], our approach navigated between 'scientifically descriptive' and 'artfully interpretive' [16]. Codes were initially developed inductively through an iterative team review process beginning with a preliminary test interview and the first of the subject interviews. The codes consisted of the following categories: interviewee demographics; relevance of standards in general; and relevance of each of the five ASPE SOBP domains. Within each category, specific subcodes were derived from the data. These codes were then applied to the remaining interviews and additional codes were also added iteratively as we engaged with the additional interviews. We chose this approach as a way of 'taking [text data] apart to see what they yield before putting them back together in a meaningful way' [17].

Interviews were analysed by entering codes manually and making notes about initial impressions. Individuals then met in pairs to discuss coding and to either come to agreement about it or discuss differences in the interpretations of the meaning of the data. A third investigator also reviewed this coding, noting if codes were applied consistently or if there were differences. The result was a code framework with 12 subject areas and 112 possible codes. Codes were entered into NVivo (version 12, QSR International Pty Ltd.; 2018). Reports were generated aggregating subjects' comments in each of the 12 subject areas. All codes were applied repeatedly across multiple interviews. All investigators reviewed the aggregate

Table 1: Interview guide

Interview guide		
Interviewees and program details		<ul style="list-style-type: none"> • Name • Location (Country/Center)/big city or rural • Professional Background • Current Position • Years of experience in working with SP? • Have you been an SP yourself? • How many SP do you work with? • How many SP trainers do you work with? • What are their professional backgrounds? • Who are the learners? • Which tasks are performed by the SP (formative and/or summative assessment, education, research)?
Standards in general		<ul style="list-style-type: none"> • Could you tell us, how would you define standards. • What is your understanding of Standards? What do you think about 'Standards' in General? • Are standards important for you in working with SPs? • What happens if you cannot meet a certain standard? • In general, what do you think about the ASPE SOBP? • When & where did you first hear about ASPEs SOBP? • Did they influence your practice? -- If yes, in what way did they influence your practice? -- If no, what are the obstacles and/or objections?
ASPE SOBP	Safe work environment	<ul style="list-style-type: none"> • What is the principle/practice in this domain that is the most important to you? • How does your way of doing it relate to ASPEs SOBP? • Is there anything, that you adapted/added or you would like to adapt/add? • Is there anything that is not relevant to you?
	Developing cases	<ul style="list-style-type: none"> • What is the principle/practice in this domain that is the most important to you? • How does your way of doing it relate to ASPEs SOBP? • Is there anything, that you adapted/added or you would like to adapt/add? • Is there anything that is not relevant to you?
	Training	<ul style="list-style-type: none"> • What is the principle/practice in this domain that is the most important to you? • How does your way of doing it relate to ASPEs SOBP? • Is there anything, that you adapted/added or you would like to adapt/add? • Is there anything that is not relevant to you?
	Program management	<ul style="list-style-type: none"> • What is the principle/practice in this domain that is the most important to you? • How does your way of doing it relate to ASPEs SOBP? • Is there anything, that you adapted/added or you would like to adapt/add? • Is there anything that is not relevant to you?
	Professional development	<ul style="list-style-type: none"> • What is the principle/practice in this domain that is the most important to you? • How does your way of doing it relate to ASPEs SOBP? • Is there anything, that you adapted/added or you would like to adapt/add? • Is there anything that is not relevant to you?
Conclusion		<ul style="list-style-type: none"> • What is your overall view of the ASPE SOBPs? • Is there anything else, that you would like to add to this topic?

outcomes of coding analysis. Over the course of several months, we then met regularly as a group. The data were further analysed as we searched for, reviewed, defined and named the themes. Themes were iteratively updated during this process and aligned with the study aims. These sessions were recorded, and notes were taken.

The research team

The members of our research team have extensive experience as SP educators, work in diverse practices (academic, hospital, assessment) and are long-standing members of ASPE, except for ER, who joined the project as a student research assistant under the supervision of JLM. Several of us (BGB, HH, JLM, CMS) have held positions

on the ASPE Board of Directors. Two of us (CMS, HH) were also co-authors of the ASPE SOBP. We come from four different countries including Canada (CMS), Germany (HH), Switzerland (BGB) and the USA (JLM, ER, BB) and have backgrounds in the humanities, medicine and anthropology. Throughout the process of gathering and analysing the data, we were highly aware of our positioning in this field and our connections to the standards and subjects. During our meetings, both in pairs and in larger groups, we implemented a collaborative and reflexive approach [18] to examine the data and share our perspectives. We considered how our connections might inform our interpretations and challenged each other to think more deeply and in different ways about the data.

Results

Participant demographics

Twelve participants (from 11 countries representing 6 continents) were recruited for the study. There were 7 females and 5 males. Experience working with SPs ranged from 5 to 30 years (with a mean of 11.75 ± 6.63 years). Professional backgrounds included medicine, allied health, theater, education and social science. Six were members of ASPE; 6 were non-ASPE members. All the participants practiced SP methodology in a formative context. Nine of them were experienced in working with SPs in summative contexts as well. One individual also worked with SPs in research related to quality control in healthcare. The participating SP educators worked with undergraduate medical, nursing, pharmacy, dental and physiotherapy students. Six of the participants also worked with postgraduate learners. The size of the SP programs varied from 8 to 450 SPs.

Themes

Four primary themes were identified, each with multiple subthemes.

Theme 1 – Influencing SP educator practices

Overall, SP educators valued the standards. One subject noted that they were ‘... waiting for a document like this’ (S6) to support them in their work. Another subject validated the importance of evidence-based standards, in general, to assist them in their work, stating:

... having some standards or ideas that are informed by practice and evidence is really important. (S4)

Subjects identified four ways that the ASPE SOBPs were specifically important to their practice.

Providing guidelines

From a big-picture perspective, SP educators viewed the standards as a helpful ‘framework’ (S2) that could guide them in practice.

The standards ... they’re ... practice guidelines ... that orientate us to what we should be doing. (S9)

This guidance was comprehensive, according to this subject:

They inform my work on a daily basis ... both in the individual work I do, but also in the context of the work that we bring into our center and the projects that we will agree to do. ... (S4).

At the same time, another subject noted that even though they were strongly influenced by the standards, they appreciated the flexibility of the standards, a feature that allowed them to make some adjustments to make the standards work in their context:

I also know that I’ve also had to adapt some of the principles and practices to be relevant to our context. (S12)

Another subject used the metaphor of a journey with a road map to describe the process, noting:

It’s like the standards have set the destination, but the route is up to every individual institution. (S2)

Informing policies & procedures

Subjects reported on how ASPE SOBP informed the daily running of their programs:

I’m a big advocate of them, and I’m often referring back to them when we are looking to create policies or procedures within our center. (S6)

The standards were further identified as a way to ‘make all the policies more comprehensive’ (S7) and as a tool to provide greater clarity related to the ‘guideline and parameter of the simulation activity’ (S5).

Promoting safety

Safety was described as a crucial issue for all the SP educators interviewed. Many talked about the influence of the ASPE SOBP in the implementation of a safe work environment. One individual described the standards as ‘the cornerstone of safe simulation’ (S6), while another noted:

... if we don’t follow the standards, it can cause damages. The damage may be to ... the safety of our standardized patients, and maybe damage to the learners ... and also maybe even the assessment itself. (S9)

Supporting quality management

Quality was identified as being an essential element in managing an SP program by one subject who noted: ‘... if we don’t have quality management in the SP program, we can’t improve it’ (S8). The ASPE SOBP were identified as providing a valuable set of criteria to guide an SP educator in measuring the quality of their work and improving their practice:

I think that standards are a way to do things right. They establish some definitions and concepts that allow you to know if you’re doing right or wrong, if you’re performing your scenarios with criteria of quality. (S5)

Theme 2 – Advancing professionalization

Developing a common language

One significant way SP educators found that the ASPE SOBP promoted professionalization of the field was by creating a common language to ensure effective communication and mutual understanding amongst practitioners.

... they also create a common language for all of us. So, if I’m talking about something, it’s like everyone will know what I’m talking about. (S10)

Defining expertise and scope of practice

Study subjects felt that the SOBP’s definition of expertise and a scope of practice advanced professionalization by promoting accountability for SP educators to each other and to the stakeholders they work with.

So that’s the other thing that I think is great, you know, it professionalizes us, and it helps hold us accountable

to one another to ensure that, you know, our students, our SPs, and all our stakeholders can expect the same practices put in place and just hold one another accountable to those standards. (S6)

The standards were also seen to advance professionalization by providing a means to benchmark expertise. One subject identified that their group was using the standards to determine milestone competencies for the development of SP educators:

It's research about the milestone of standardized patient trainers ... the milestone is a new assessment to figure out the competency trajectory from the novice to the experts. ... And the SOBP is a very important reference for this project. (S9)

Promoting professional development

There was also a recognition and appreciation by the subjects that the standards supported the professional development of SP educators. One subject noted that standards helped to validate an SP educator's work journey, stating:

... according to these standards, these SOBP, I can be sure that I'm doing the right thing in my career development. (S8)

This same subject also realized that the standards supported their personal efforts in research:

I'm not so sure if I have to apply some grants from our government institute, but according to these standards, yes, it's very important. So, I got the grant. (S8)

Subjects also identified that the standards helped them to develop as leaders by creating a way for them '... to go a step higher...' (S1) and offering valuable benchmarks for reflection on how to grow and improve:

We have to think. What can we do better? Is it the training? Is it the whole program itself? What? What can be learned? How can they [the SPs] learn better? (S1)

Another SP educator noted that leadership practices in the standards reflected how they mentored SPs in by inviting them to submit abstracts for academic events, creating 'categories where they could come up with areas to present' (S7) that would highlight their valuable contributions.

Legitimizing and empowering practice

Subjects mentioned that having the standards supported by evidence and a community of practice empowered them by providing the means for them to validate their own practice to organizational stakeholders. Additionally, it empowered them by creating buy-in from others (including their own SP educators) about how to work with SPs.

... with the SOBP ... we have ... these guidelines, so we can use this to convince others how to train, even our SP trainers (S9)

Also, legitimizing their concern for safety, they saw the standards as being '... really beneficial as a way to justify safe and effective practices' (S6).

Theme 3 – Identifying challenges to implementation

Struggling to apply the ASPE SOBP

Different reasons emerged for why some SP educators struggled to apply the standards in their programs. For those, it was sometimes difficult to know, in a practical and concrete way, the literal steps to take to start to operationalize the standards, and integrate them into their current practices:

It's just, how do you break that down into everyday practice? How do you embed this into your daily life...? (S6)

Another subject identified a tension they experienced between upholding the notion of standardization, implicit in a set of standards, and a desire for flexibility and individuality.

Standards are ... flexible sometimes. And sometimes you have to adapt the standard to the context and not the context to the standard. So, standards help you to have a certain level of quality, but standards should not be in the middle, should not be that big that the standard takes everything, all the space. Individuality must have space also. (S1)

Identifying cultural barriers

Within the process of applying the SOBP, an important challenge was identified related to cultural differences, primarily related to those whose first language is other than English. One subject noted:

I think the main problem—or maybe not problem—circumstance - is that, as you can imagine, the language barrier. It has been a barrier for many of us. (S6)

Another subject identified cultural differences related to the use of specific English words in the standards that caused confusion in interpretation:

I know there are many cultural differences In English for example 'SP educator', 'SP trainer', sometimes you use the word 'client', sometimes ... you use 'simulated participants.' What is the difference between simulated and standardized? Things like that. (S5)

Lacking support and resources

One of the challenges for study subjects was their perception of a lack of knowledge, understanding or acceptance of SP-based education by decision-making stakeholders in an organization that, in turn, created barriers for implementation of the standards. One subject remarked that, in their context '... there's simply not as much of an appreciation for the work that SPs do yet' (S2). They expressed frustration and felt disempowered to implement the standards, describing the situation as one in which they noted:

I'm not in a position yet where I can go and say: 'Look this is how it's supposed to be done', and 'According to the ASPE Standards of Best Practice this and this and this is what the best practice is'. (S2)

Another SP educator described feeling unsupported in implementing the standards, describing a potentially hostile environment and probably punitive outcome for them if there were any issues with putting the standards into practice:

... when I put all the Standards of Best Practice and the program doesn't meet that ... I should not be in a position where I'll be challenged or I will be, you know, it backfires. (S7)

There was also a perception that not all SP programs are resourced in a way that allows them to implement the standards.

I would say that anybody working with simulated patients should have some understanding and access to resources [to support]... best practices in SP simulation, and I don't know that everyone does. (S6)

Theme 4 – Bridging gaps in the ASPE SOBP

SP educators identified many gaps in the ASPE SOBP and offered suggestions for improvement.

Adapting to shifting delivery methods

Since the interviews for this study took place during the early days of COVID, many of the subjects reported that their SP practice had shifted to online work. SP educators identified that they would find it helpful to have guidance in the standards related to effective distance-simulation practices with SPs.

... especially now that, for example, we are doing most of our educational interventions and assessments online. So, I think there's something about support and access that might need to be added. ... Support and accessibility of online formats or something? Because that, you know, that's different. (S4)

On the other hand, in some contexts, SPs were being asked to come back to work and SP educators were wanting specific guidance about safety related to areas such as adequately protecting SPs from infection:

... in times of COVID, this idea of safe work practice is even more important. ... like I'm supplying my simulated patients with masks and shields and everything to do some sessions this month or letting them do it virtually. (S4)

Advocating for SP well-being

Subjects also indicated that they felt a huge responsibility to promote SP well-being during this time. They noted the potential toll that it took on the mental health of SPs to work from their homes:

... How about mental health? How is it working with children doing the things in the house and trying to work? (S5)

One subject felt that the standards should contain more ethical considerations about caring for SPs, especially in

these special circumstances, including ensuring that they have adequate compensation.

Yeah. I missed a little bit the insurance stuff, like if they are employed, do they have that proper insurance, sickness insurance, or unemployment insurance, especially now when the SPs do not have as much work as normal, and if SPs are employed with a contract, do they have all those things like unemployment insurance ...? (S1)

Working with specific groups of SPs

Not all recommendations related to COVID-19. For example, there was a request to include guidance for working with specific groups of SPs such as older adults, for example, 'because they have different physiological and cognitive needs' (S10). Another subject noted that they wanted more specific guidance for creating scenarios related to:

... cases with LGBT people, immigrants, disabled people, ... and many other situations that we didn't [represent] in the past. (S5)

Ensuring accountability

Some subjects desired more precise guidance for accountability in the implementation of the standards, particularly related to program management.

... So I think I've said, you know, the challenge with standards is anybody can look at the standards and say, 'Oh, yep, I do all of those'. So I think there has to be a way to hold, that there should be a way to help hold people accountable for how the simulated patient program's being managed (S4)

Providing scalability

Finally, another recommendation was guidance how smaller organizations might adapt the standards to their context.

... [it] felt a little bit like it was for bigger organizations, more so than us. There are some really big things there, that we thought, oh, how much of that is relevant. ... I think a lot of it is ... we found that very helpful for our context, but I think we'd love in ... future iterations or adaptations to almost have like a scalable model (S12)

Discussion

In this paper, we present the results of a qualitative study that explored the perceptions of experienced SP educators from around the world related to the ASPE SOBP. The study had two aims: to understand the relevance of the ASPE SOBP to the practices of SP educators from around the world; and to identify improvements to the ASPE SOBP from a global perspective.

Though SP educators across the world varied in their perspectives, many still found aspects of the SOBP that resonated with their local practices.

The first theme, *influencing SP educator practices*, highlighted the importance to these SP educators of having the ASPE SOBP to guide what has been identified as a

complex function in simulation practice: the management of their programs [10,19–22]. Almost all the subjects noted that the standards supported them in either creating policies and procedures or refining their current processes. They also saw the standards as a tool to promote program quality, an SOBP core value. Further, they considered the SOBP as a means for promoting the physical and psychological safety of SPs. This finding aligns with wider consensus amongst simulation educators that, unlike other simulation modalities (e.g. manikins), SPs are living beings and their safety is a non-negotiable ethical imperative [8,23–25].

Advancing professionalization, the second theme, was embraced by the SP educators as a significant benefit. Indeed, advancing the professionalization of the field was one of the drivers behind the creation of the standards [3,6]. One important way in which SP educators found that the SOBP contributed to professionalization was by providing them with a common language. Defining the scope of practice for them was another. They also valued the SOBP emphasis on professional development as a means of professionalizing the field. Professional development is Domain 5 of the standards, and includes career development, scholarship and leadership. The ASPE SOBP emphasize that SP educator work is a career, not just a job but an occupation undertaken for a significant period of a person's life and with opportunities for progress. The SOBP further emphasize that integral to career development is engagement in scholarship and leadership [1]. Regarding scholarship, appreciation was expressed in the way the SOBP modeled a scholarly approach, having been created through a process that integrated evidence from consensus-based opinion and peer-reviewed research defining good practice [26]. Further, subjects saw the standards as an inspiration to contributing to the scholarly work needed to move the field forward. This observation is especially important since previous research has indicated the need for scholarship within the field: The role of the SP educator is under-researched [21] and SP methodology is poorly reported [27]. SP educators in the study were attuned to this need and eager to address it.

In addition to career development and scholarship, the SOBPs, in the eyes of these subjects, identified leadership practices they could relate to in their contexts. Their leadership role as SP educators and/or managers of their programs includes recognition of SPs as allies and colleagues, and developing their skills, and the skills of all those who work in their programs. Moving forward, the leadership significance of the SOBP may play out in an important way regarding gender. Healthcare delivery and education, including simulation are culturally specific, gendered practices with different levels of prestige and influence, depending on the country [28,29]. Given that most SP educators are female [30] (and work in often male-dominated professional settings), the SOBP could serve as an important tool for empowering them as educational leaders.

Although the response to the standards was generally very positive, obstacles were encountered and were articulated in the third identified theme, *identifying challenges to implementation*. SP educators mentioned

three different types of challenges. The first related to struggling with applying the standards; the second, identifying cultural barriers and the third to lacking resources and support. In reference to these challenges, questions arose about how much flexibility was allowed for the SOBP to still be a reliable guideline when SP educators felt constrained in their ability to fully implement them. SP educators felt a tension between the need to comply with and not compromise the standards and a desire for the flexibility to adapt the standards to their contexts (e.g. small vs. big organizations, formative vs. summative settings, assessments vs. communication training, volunteer programs and programs working with paid SPs). This tension is something that is acknowledged in the standards [1] as SP programs vary so widely, a fact that is illustrated by the wide range in size of the programs of the subjects in this study.

The cultural barriers that were identified relate to language barriers and differences in terminology. Some of these barriers are being addressed by translations of the standards [31]. As a part of their task, translators are asked to identify cultural differences related to language and other practices they encountered. Many differences in language, like those identified by our subjects, have been reported. Translators have identified other cultural differences are related to country-specific practices. For example, in some countries, SPs do not assess learners, so that part of the standards is not applicable to them. All of the identified challenges in applying standards described by the study subjects are also recognized and wrestled with in the broader simulation literature [22,32,33].

The fourth theme, *bridging gaps in the ASPE SOBP*, provided opportunities for the SP educators interviewed to make suggestions for future iterations of the ASPE SOBP. They requested further guidance in the standards to adapt to shifting delivery methods brought on by circumstances out of everyone's control. Although this study (including the interview guide) was designed prior to COVID-19, the interviews were conducted during spring and fall of 2020 – a time when countries all over the globe were confronted with unprecedented lockdown situations. In response, much SP work shifted from face-to-face to online [34–38]. Although some SP educators had been involved in telehealth simulations [39], many had never worked online nor had their SPs. In this new context SP educators had to consider not only SP methodology, but also technology and how to best support their SPs. The learning curve was steep and stressful for many. Articles and presentations emerged that provided case examples and drew on broader guidelines for conducting online teaching [36,40]. At the same time, fluctuations in restrictions related to the pandemic meant that in many contexts, the delivery of SP work became hybrid, with a mix of online and face-to-face delivery of sessions. In response, the SP educators interviewed expressed the wish not only for distance simulation guidelines, but also guidelines for infection control protocols to keep SPs safe, echoing the need highlighted by educators in the broader simulation community [37,41].

Another COVID-19-related area for improvement identified by the study educators related to the ethical duty these SP

educators expressed towards advocating for SP well-being, again especially during the time of COVID-19. If SPs were working at home, they often had to cope with the emotional stress of portraying challenging roles in isolation combined with maneuvering new technology and juggling family duties. If SPs were working in person, they had to adhere to health and safety policies (e.g. testing, physical distancing, wearing personal protective equipment like masks) that could affect their ability to perform. They also faced the possibility of contracting COVID-19 without healthcare insurance. Many other SPs were suddenly thrown out of work yet had no access to unemployment insurance since they were casually employed. Although ethical guidelines for healthcare simulation practices existed [42], those guidelines were written before the pandemic and do not address these situations. In response simulationists came together with a strong voice to propose how ethical guidelines related to working with human beings could be updated [25,43,44]. SP educators in this study advocated for further incorporating such ethical approaches into the SOBP.

As simulation practices focus on the creation of more inclusive, equitable and representative spaces, SP educators also identified a need for guidance when working with groups of SPs who represent specific populations (e.g. older adults, children and adolescents, refugees, LGBTQ). In principle, the current standards were applicable. However, a need for more specific guidance to work in an informed, sensitive and respectful manner with SPs who belong to or who are portraying such groups was suggested. Research is emerging related to working with various groups [45–49] that may provide ideas for how to augment the standards.

There were also valuable suggestions for more guidance for SP program managers to adapt the SOBPs to specific program needs. The request for accountability aligns with one of the core values in both the ASPE SOBP and the Healthcare Simulationists Code of Ethics [1,50]. The need for guidance in scaling the standards to more and less resourced programs reflected the high degree of variation in SP programs; one size does not fit all. An intriguing idea for allowing for flexibility was developed by a German group of SP educators who defined minimum requirements and developmental milestones in their standards [10]. The flexibility to decide to follow a minimum instead of an absolute standard could help organizations with limited resources stay true to the standards, while still setting aspirational goals for future developments.

The suggestions for improvement identified by the SP educators who were interviewed provide valuable input to be considered as the standards undergo their next set of revisions. This study underscores the benefit of including SP experts from around the world as representatives in this process. The revision, scheduled to begin in 2023, is an opportunity to build even stronger global connections between SP practitioners as we learn from and with each other. Also contributing to this international partnership is the ASPE-led initiative to translate the standards into languages other than English (Arabic, French, Modern Chinese, Traditional Chinese, Japanese, Spanish and

Turkish so far) as a way to continue to make the standards accessible to all SP educators, no matter the language they speak [31].

Limitations

There are some limitations to this study. One limitation is the potential for bias, related to our close relationships to the standards and ASPE, influencing our interpretation of the data. Also, some of the subjects are colleagues that some of us have worked with in other contexts. We were concerned that they may have felt pressured to provide answers that they thought we wanted to hear or would not feel comfortable expressing criticism or that we would overlook anything perceived to be unfavorable in our analysis. We were highly aware of this potential conflict and addressed it in two ways. First, the semi-structured interview guide included questions encouraging subjects to offer constructive criticism of the standards and areas for growth (see Table 1). Participants were encouraged to talk about desired changes in or improvements to the SOBPs. We stressed to the subjects that we considered these types of comments to be very helpful and most welcome. This study was conducted with the upcoming revision of the SOBPs in mind. Our mindset going into this project was that it was important to us that any weaknesses or gaps in the current version be identified. Second, we made sure to continually challenge ourselves during the analysis of the data to acknowledge our bias and positioning in the field. We recognize that the ASPE SOBP is a work-in-progress and that it can and must be revised as our practice and understanding of supporting SPs in their work continues to evolve. Another limitation was the sample size. However, although 12 participants cannot represent the entire spectrum of global practices, the results of the study demonstrate that the ASPE SOBP are relevant and applicable to SP educators in a number of very different contexts regarding culture, format and background. Future research could include additional perspectives from other SP educators as well as opinions from SPs, faculty and learners.

Conclusion

In conclusion, this study gives voice to a diverse group of SP educators from around the world about the ASPE SOBP. Participants recognized the standards as a powerful tool to advance the professionalization of SP educators. Of special value to further development of the ASPE SOBP, they identified challenges with implementation and offered suggestions for improvements in future iterations. The standards are a living document, and feedback from diverse SP educators from around the world can only strengthen their applicability to the work of all SP educators. As one of the subjects reminds us:

... and maybe even it's good, but ASPE always should be open to challenge these standards and ask, are they really the best standards, or is there anything else we could do? (S3)

Declarations

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Authors' contributions

All authors certify that they have participated sufficiently in the work to take public responsibility for the content, including participation in the concept, design, analysis, writing, or revision of the manuscript. Their contributions to the manuscript are the following: All authors participated in the conception and design of the study during periodic meetings. The interviews were conducted by CMS, BGB and HH. ER did the initial transcription that was reviewed for accuracy by CMS, BGB and HH. JLM and ER created an initial code book, that was finalized in a group process in which all authors were involved. All authors participated in coding interviews and meetings to analyse findings. The manuscript was drafted by CMS (introduction, discussion), JLM and ER (methods) and BGB (results) and revised by BB, HH and ER. BGB and CMS worked on subsequent drafts of the paper to finalize it. All authors reviewed and approved the final manuscript.

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Competing interests

None declared.

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